

Alignment of Pantothenate Synthetases From Corn, Eucalyptus, Soybean, Tulip, Wheat, Rice, and Lotus

SEQ ID NO:2	cpj1c.pk005.c12fis	[corn]	
SEQ ID NO:4	crln.pk0125.c12fis	[corn]	
SEQ ID NO:7	eej1c.pk005.p14fis	[eucalyptus]	
SEQ ID NO:9	ssl.pk0021.d7fis	[soybean]	
SEQ ID NO:11	etb1c.pk004.j20fis	[tulip]	
SEQ ID NO:13	wlm96.pk036.k8fis	[wheat]	
SEQ ID NO:14	gi2292978	[rice]	
SEQ ID NO:15	gi2292921	[lotus]	
1			
SEQ ID NO:2	MAAAAAA-----VHEPEVIRDKAAMRAWSRRRAECKAVALVPTMGFLHEGHLISIAAFAAS-AGPIAVVSVIYVNPSPQFAPTE		90
SEQ ID NO:4	MAAAA-----VHEPEVIRDKAAMRAWSRRRAECKAVALVPTMGFLHEGHLISIAAFAAS-AGPVAVVSVIYVNPSPQFAPTE		
SEQ ID NO:7	MAAPP-----KEPLVITDKAEMREWSRSARRQRTIALVPTMGFLHEGHLISVREARRADA-----VVSVVYVNPSPQFAPTE		
SEQ ID NO:9	MAPAP-----R-----VISDKASMRWSRSARRQRTIALVPTMGFLHEGHLISVREARRADA-----VVSVVYVNPSPQFAPTE		
SEQ ID NO:11	MAAAPAAASSAAAAASVSEPVITTSKPEMLAWSRRHRRRLSHTIALVPTMGFLHEGHLISIAAFAAS-AGPVAVVSVIYVNPSPQFAPTE		
SEQ ID NO:13	MAAAG-----EPEVIRDKAAMRAWSRRRAECKAVALVPTMGFLHEGHLISIAAFAAS-AGPVAVVSVIYVNPSPQFAPTE		
SEQ ID NO:14	MA--P-----M-----VISDKDEMRSKWSRRRAECKAVALVPTMGFLHEGHLISVREARRADA-----VVSVVYVNPSPQFAPTE		
SEQ ID NO:15	MAAP-----REPEVIRDKAAMRAWSRRRAECKAVALVPTMGFLHEGHLISIAAFAAS-AGPVAVVSVIYVNPSPQFAPTE		
91			
SEQ ID NO:2	TYPSPDFAGDLRKLAAAT-GVVAAVFCPPDLYVRGSA--DRPSAAGASGAVSCLEDAGGHAHETWIRVERLEKGLCGSSRPVFFRGVATV		180
SEQ ID NO:4	TYPSPDFAGDLGKLAAAT-GVVAAVFCPPDLYVRGSA--DRPSAASASGAVSCLEDAGGHAHETWIRVERLEKGLCGSSRPVFFRGVATV		
SEQ ID NO:7	TYPSPDFEGDLGKLRAVPGVDVVFPRQNLIDYQREVQ-GSGVESDNGSVSCLEEK-GMGHEAWVRVERLEKGMCGKSRPVFFRGVATV		
SEQ ID NO:9	TYPSPDFDGVKKLASVPGVDVVFHPRNLYDYKNGGG-DVAEAGG--MVSCVE--SGSGHESWVRVERLEKGLCGKSRPVFFRGVATV		
SEQ ID NO:11	TYPADLAADLRNLRAAC-PSVAAVFCPTNPY-----ADGHETWVRVERLEKGLCGKSRPVFFRGVATV		
SEQ ID NO:13	TYPSPDLAGDLRKLAAAT-GAVHAVFNPPDLYHRGAAVSGRRAPAGAAASSCLE-AGGDGHETWIRVERLEKGLCGASRPVFFRGVATV		
SEQ ID NO:14	AYPSDFQGLQKLMSVPGVDVVFHPRNLYDYGGDGD-VAECGGDGVVSCVDRRSGFHETWVRAEKLEKPLCGKSRPVFFRGVATV		
SEQ ID NO:15	TYPSPDFAGDLRKLAAAT-GVVDVAVFNPPDLYVRGSA--GRRGAGS--GGAIISCLEAAGDGHETWVRVERLEKGLCGASRPVFFRGVATV		

FIG. 1A

181 270
 SEQ ID NO:2 AKLENIIVEPDVAVFGKKDYQQWRVLCRMVRDLDFAIQIVGSEVVREADGLAMSSRNVLSEEDRKKALSI SRSLVDARTAAALSGSNR-SQ
 SEQ ID NO:4 AKLENIIVEPDVAVFGKKDYQQWRVLCRMVRDLDFAIQIVGSEVVREADGLAMSSRNVLSEEDRKKALSI SRSLVDARTATLSGSNR-SQ
 SEQ ID NO:7 TKLENIIVEPDVAVFGKKDYQQWRVLCRMVRDLDFAIQIVGSEVVREADGLAMSSRNVLSEEDRKKALSI SRSLVDARTATLSGSNR-SQ
 SEQ ID NO:9 TKLENIIVEPDVAVFGKKDYQQWRVLCRMVRDLDFAIQIVGSEVVREADGLAMSSRNVLSEEDRKKALSI SRSLVDARTATLSGSNR-SQ
 SEQ ID NO:11 SKLENIIVEPDVAVFGKKDYQQWRVLCRMVRDLDFAIQIVGSEVVREADGLAMSSRNVLSEEDRKKALSI SRSLVDARTATLSGSNR-SQ
 SEQ ID NO:13 AKLENIIVEPDVAVFGKKDYQQWRVLCRMVRDLDFAIQIVGSEVVREADGLAMSSRNVLSEEDRKKALSI SRSLVDARTATLSGSNR-SQ
 SEQ ID NO:14 TKLENIIVEPDVAVFGKKDYQQWRVLCRMVRDLDFAIQIVGSEVVREADGLAMSSRNVLSEEDRKKALSI SRSLVDARTATLSGSNR-SQ
 SEQ ID NO:15 SKLENIIVEPDVAVFGKKDYQQWRVLCRMVRDLDFAIQIVGSEVVREADGLAMSSRNVLSEEDRKKALSI SRSLVDARTATLSGSNR-SQ

271 325
 SEQ ID NO:2 EIKDQIVRTTTEAGGQVDYVEIVGQESLVPVERMDRPCVICVAAWFGKVRLLIDNIEIHVDSSTVLSI
 SEQ ID NO:4 EIKDQIVRTTTEAGGQVDYVEIVGQESLVPVERMDRPCVICVAAWFGKVRLLIDNIEIHVDSSTVLSI
 SEQ ID NO:7 NLKDSVIQAIQEAAGKIDYAEIVDQESLEAVEEIRSPVSCVAAWFGKVRLLIDNIEIN-----V
 SEQ ID NO:9 KLTNLVIGSVTDAGGRIDYAEIVDQNNLEKVEQIKSPVFCVAAWFGKVRLLIDNIEINLS-----MNV
 SEQ ID NO:11 ELKDIAQSIQEAAGRIDYAEIVDQESLKVLDITSPVVMCIAWFGKVRLLIDNIEINLT-----TI
 SEQ ID NO:13 HIKDQIVQTLTEAGGRVDYVEIVGQESLVPVETIDRPVVICVAAWFGKVRLLIDNIEIHQIS-----
 SEQ ID NO:14 KLINLVVQSIQEAAGRIDYAEIVDQNNLEKVEWIKGPVFCVSAWFGKVRLLIDNIEINLT-----
 SEQ ID NO:15 QIKNKIVQTLTETGGQVDYVEIVGQESLVPVEQIDGPVVICVAAWFGKVRLLIDNIEIDTRS-----

FIG. 1B